

## PATENT ABSTRACTS OF JAPAN

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(54) CONJUGATED LIPID CORPUSCLE WITH PROTEIN

## (57)Abstract:

PURPOSE: To obtain the subject conjugated corpuscle having prolonged half-life of protein in blood to effect sufficient exhibition of the activity of the protein by bonding a protein to the surface of a lipid membrane composed of a lipid and a positively charged lipid and/or negatively charged lipid.

CONSTITUTION: The objective conjugated corpuscle can be produced by bonding a protein to a surface of a lipid membrane composed of a lipid (e.g. phospholipid, glycolipid and derived lipid) and a positively charged lipid (e.g. a lipid produced by bonding a fatty acid or cholesterol to a 12-22C aliphatic amine or basic amino acid) and/or a negatively charged lipid (e.g. acidic phospholipid). The amount of the positively and/or negatively charged lipid is about 1-1,000  $\mu$  mol per 100  $\mu$  mol of the phospholipid. The combined use of a positively charged lipid and a negatively charged lipid is preferable. The amount of protein to be bonded to the lipid surface is about 0.01-10 pts.wt. based on 100 pts.wt. of lipid used in the formation of the lipid membrane.